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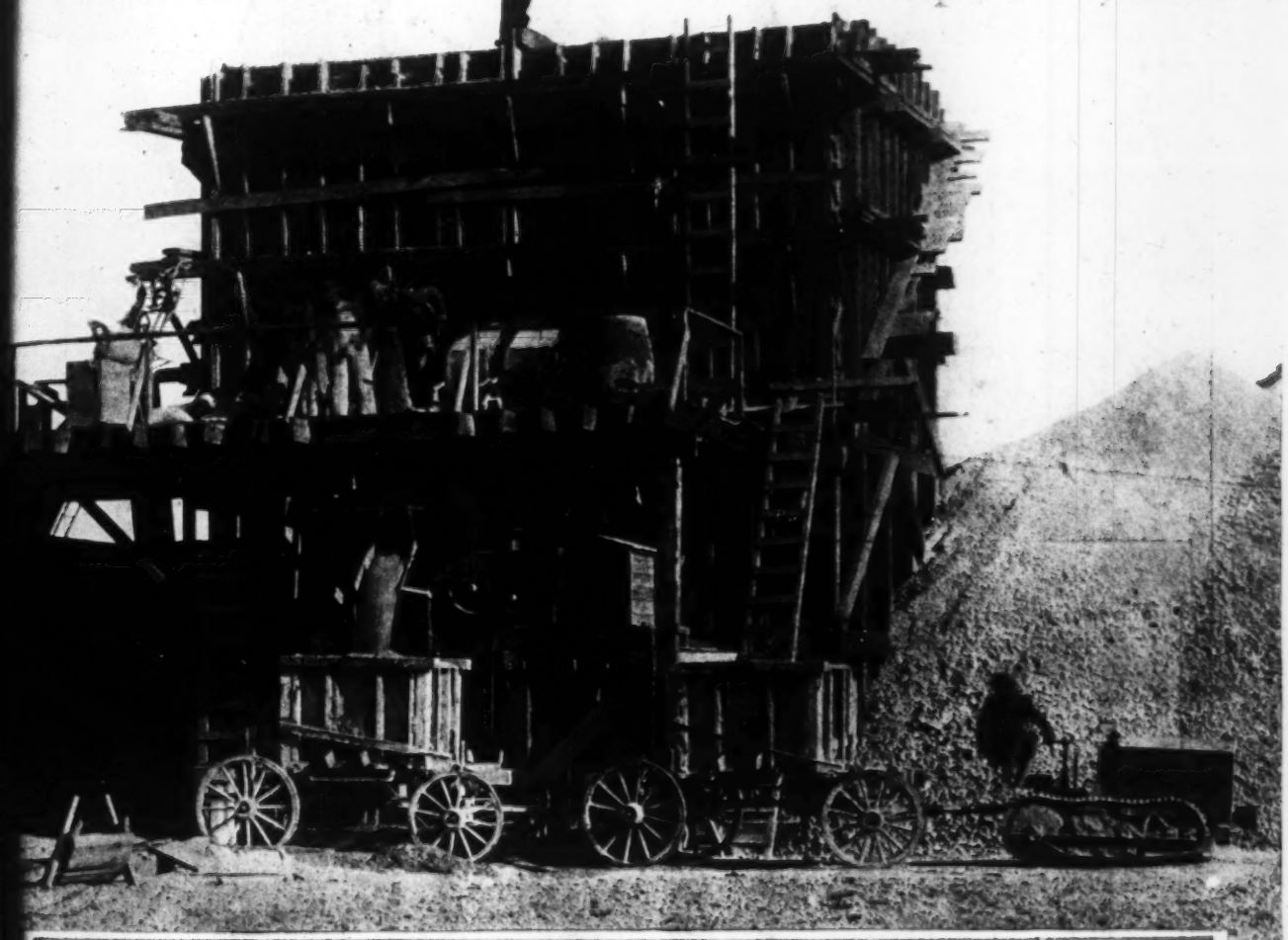

Concrete Mixed at Central Plant Delivered in Tractor-Drawn Carts

On United States Housing Development near Portsmouth, Va., concrete is delivered to all the house footings in tractor-drawn carts. The round trip on the longest haul of 1750 feet, each way, is made in ten minutes. Each cart has interior paddles geared to the wheels to stir the concrete during transportation.

How to Design Concrete Mixtures
By PROF. D. A. ABRAMS

New Methods for Solving Backwater Problems
By H. R. LEACH

KREOLITE LUG WOOD BLOCKS

"The Paving that's Saving"

The heaviest and most strenuous traffic in the world is along the tracks of the New York Railways Co. Kreolite Lug Wood Blocks are used here and they stand up under the gruelling, grinding, strain of heavy wheels which incessantly travel over their gripping surface.

Kreolite Lug Wood Blocks provide sufficient foot hold for horses and eliminate any danger of traffic going down on the car tracks, they also prevent buckling and spreading of rails due to expansion.

The Jennison Wright Co.,
2479 Broadway, Toledo, Ohio

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ENGINEERING NEWS-RECORD

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AND CONTRACTING

E. J. MEHREN, *Editor* — CHARLES WHITING BAKER, *Consulting Editor*

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Modern Methods Applied To Group House Building

BUILDING a dwelling or a series of dwellings was raised during the war from a mechanic's job to an engineering operation. The designs for the numerous towns for the war workers involved little that was new. But the construction, turned over to contractors accustomed to handling large projects, was rushed through with methods and economies unknown in house building heretofore. Some of these methods are well illustrated in the article on another page describing the Cradock development. The effectiveness of machinery in place of men for such work cannot be questioned, although relative cost figures are not here available. Particularly to be noted for use where small amounts of concrete have to be placed over a large area is the system of central concrete mixing with distribution in tractor-drawn carts.

Governmental Buying of Construction Material

CLAUSES in contracts providing for the purchase and delivery to highway contractors of all materials, thus relieving them of the hazard of price changes, have had many advocates in the past, particularly during the war. Such a plan, operated in Outagamie County, Wisconsin, was described in *Engineering News-Record* of Feb. 6, 1919, p. 289. The advantages of this procedure to the contractor are obvious. Besides the relief from the risks already referred to, there is released for use that part of the contractors' capital usually tied up in delivered materials. Responsibility for quality also rests with those who let the contracts, and, where large amounts of work are under way, the authorities, by controlling shipments and changing routings on the indications of daily reports, can deliver the right amount of material at all times, thus eliminating delays and demurrage charges. The advantages to the state or county may not be so apparent, but the adoption of the custom would no doubt reduce the cost of the finished road. An added incentive at the present time lies in the fact that lower freight rates are offered by the Railroad Administration on materials bought by Federal, state county, municipal and township governments. Considering these conditions, it would appear that now is a good time to try the system of Governmental buying.

Engineering Council and the Nonmember Societies

WHAT relations should the Engineering Council have with the national, state and local engineering societies which are not represented in it? It is announced that the delegates from engineering societies who have been invited by the council to meet in Chicago April 23-25 to confer on plans for a Federal Department of Public Works will, on the third day of the conference, have an opportunity to discuss the above question. At present the council has 25 members, representing the national societies of civil, mining, mechanical, electrical and testing engineers. The combined membership of these five societies is about 40,000, or an everage of 1600 members per representative. It will be necessary to take into consideration these facts, in discussing any plans for direct representation of the smaller societies on the council. What is needed is confidence on the part of engineers that the council is endeavoring to act for the interest of the engineering profession as a whole and not merely for the more successful and conservative portion of the profession which is active in the national societies. Unless the council is sympathetic with all classes of the profession and all sections of the country, its mission is bound to be relatively narrow. Such recent acts of the council as the broad invitation to all engineering societies to join in the movement for a public-works department, and this frank request for practical suggestions as to how the council may cooperate with all engineering organizations, will in themselves help to increase the needed confidence.

Navigation Improvement Under the Ohio Conservancy Law

A NEW application of the Ohio conservancy law, proposed by the city and county authorities of Cleveland, is under court test. Straightening of the Cuyahoga River where it winds along the bottom of its valley through the city is urgently necessary for the general commercial benefit of the city; it will improve navigation and thereby make dock property more accessible, will give far better utilization of the bottom lands for commercial purposes, will simplify railroad and freight distribution problems, will facilitate bridge and viaduct construction across river and valley, and, incidentally, will do something in the way of reducing the liability of floods in the bottoms. This is a new field of service for the conservancy law, which was drafted in the interests of flood protection as needed on the Miami and Scioto Rivers. However, the wording of the law specifically makes it applicable to broader purposes, and unless unforeseen objections are encountered the court may well find in its favor and decree the organization of a district. The fact is that river straightening at Cleveland is beset by many difficulties from the administrative viewpoint, and assessment of the costs upon the property directly benefited seems the only logical way to deal with the work on a justifiable basis of expenditure. There are unquestionably, many and sound objections to the creation of local improvement districts of this